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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,257	11/14/2003	Lothar Zipfel	037110.52632US	8056
23911 7590 07/06/2007 CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			EXAMINER COONEY, JOHN M	
			ART UNIT 1711	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/712,257	<b>Applicant(s)</b> ZIPFEL ET AL.	
	<b>Examiner</b> John m. Cooney	<b>Art Unit</b> 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 7-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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Applicant's arguments filed 4-27-07 have been fully considered but they are not persuasive.

### ***Election/Restrictions***

Newly submitted claims 7-12 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 1-6 & claims 7-12 are related as product and process of use, and are distinct because the product as claimed can be used in a materially different process of using that product such as the making of polyester products. See MPEP § 806.05(h).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 7-12 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 198 22 944 (equiv. to U.S. 6,380,275).

DE-198 22 944 discloses polyol premixes for the preparation of foamed products wherein teaching of polyol premixes containing polyol, the blowing agents as claimed, phosphorus flame retardants as claimed, and assistants/additives as claimed are combined in a manner and in amounts which read on the instant claims. (see the entire document).

DE-198 22 944 differs from applicants' claims in that it does not particularly recite the ranges of amount values claimed by applicants' for their combinations of blowing agents. However, the reference does teach ranges of amount values in overlap with the ranges of values of applicants' claims. Accordingly, it would have been obvious for one having ordinary skill in the art to have varied the amounts of blowing agents within the teachings of DE-198 22 944 for the purpose of imparting their foaming effect in the premixes of DE-198 22 944 in order to arrive at the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being obvious over Kruecke et al. (6,080,799) & (6,380,275), each taken alone & jointly referred to as KRUECK et al.

The applied references have a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome

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by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2)..

KRUECKE et al. disclose preparations reading on polyol premixes of polyol, the blowing agents as claimed, flame retardants as claimed, and assistants/additives as claimed which are combined in a manner and in amounts which read on the instant claims. (For 6,080,799 see column 2 line 3 – column 4 line 27, as well as the entire document & For 6,380,275 see column 1 line 53 – column 4 line 56, as well as, the entire document).

KRUECKE et al. differ from applicants' claims in that it does not particularly recite the ranges of amount values claimed by applicants' for their combinations of blowing agents. However, the KRUECKE et al. do teach ranges of amount values in overlap with the ranges of values of applicants' claims. Accordingly, it would have been obvious for one having ordinary skill in the art to have varied the amounts of blowing agents

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within the teachings of KRUECKE et al. for the purpose of imparting their foaming effect in the premixes of KRUECKE et al. in order to arrive at the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-25 of U.S. Patent No. 6,380,275.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the compositions claimed differ in amounts of materials employed such that it would have been obvious to one having ordinary skill in the art to have varied their amounts for the purpose of controlling their additive effects and function, and the premixes would have been obvious developments from the claimed methods and compositions claimed. Claim 8 of 6,380,275 discloses flame retardants but does

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not require the phosphorus agents of applicants' claims. However, looking to the supporting disclosure for its teaching effect discloses the employment of these materials for their additive function. Accordingly, it would have been obvious to one having ordinary skill in the art to have imparted their employment in the preparations of 6,380,275 for purposes of imparting their additive effect and to have varied their amounts for the purpose of controlling their additive effects and function in order to arrive at the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Claims 1-6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,080,799 in view of Hinz et al.(5,552,450).

The claims of 6,080,799 disclose blowing agent compositions and methods of use in foam forming applications. The compositions claimed differ in amounts of materials employed such that it would have been obvious to one having ordinary skill in the art to have varied their amounts for the purpose of controlling their additive effects and function, and the premixes would have been obvious developments from the claimed methods and compositions claimed. Claims of 6,080,799 differ in that phosphorus additives are not required. However, Hinz et al. discloses phosphorus agents of applicants' claims as flameproofing agents in urethane applications (column 10 lines 11-16). Accordingly, it would have been obvious to one having ordinary skill in

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the art to have employed the flameproofing agents of Hinz et al. in the preparations of 6,080,799 for purposes of imparting their additive effect and to have varied their amounts for the purpose of controlling their additive effects and function in order to arrive at the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

***Comments on reply***

The following previously held arguments are maintained herein:

Applicants' recitation of "non-combustibility" in the preamble is noted. However, distinction must be attributable to features supported by materials and limitations recited in the claims. The pointing to a combustible species in the examples of KRUECKE et al. (applicants appear at 5 of their reply to be suggesting that dimethylcyclohexylamine is combustible) does not distinguish the teaching from the instant claims without degrees of combustibility being defined or language in the claims being drafted to exclude such combustible materials. Further, the cited arts' teaching value is not limited to what they set forth in their examples. The fact that combustible elements may be employed in examples of the cited art does not negate the teachings of the totality of the references which are not seen to require the presences of the, apparently, combustible species highlighted in applicants' reply.

The employment of the transitional phrase "consisting essentially of" in the claims is noted. However:

The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. In re Herz, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original) (Prior art hydraulic fluid required a dispersant which appellants argued was excluded from claims limited to a functional fluid "consisting essentially of" certain components. In finding the claims did not exclude the prior art dispersant, the court noted that appellants' specification indicated the claimed composition can contain any well-known additive such as a dispersant, and there was no evidence that the presence of a dispersant would materially affect the basic and novel characteristic of the claimed invention. The prior art composition had the same basic and novel characteristic (increased oxidation resistance) as well as additional enhanced detergent and dispersant characteristics.). "A



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consisting essentially of' claim occupies a middle ground between closed claims that are written in a consisting of' format and fully open claims that are drafted in a comprising' format." PPG Industries v. Guardian Industries, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir. 1998). See also Atlas Powder v. E.I. duPont de Nemours & Co., 750 F.2d 1569, 224 USPQ 409 (Fed. Cir. 1984); In re Janakirama-Rao, 317 F.2d 951, 137 USPQ 893 (CCPA 1963); Water Technologies Corp. vs. Calco, Ltd., 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988). For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase consisting essentially of' for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention."). See also AK Steel Corp. v. Sollac, 344 F.3d 1234, 1240-41, 68 USPQ2d 1280, 1283-84 (Fed. Cir. 2003) (Applicant's statement in the specification that "silicon contents in the coating metal should not exceed about 0.5% by weight" along with a discussion of the deleterious effects of silicon provided basis to conclude that silicon in excess of 0.5% by weight would materially alter the basic and novel properties of the invention. Thus, "consisting essentially of" as recited in the preamble was interpreted to permit no more than 0.5% by weight of silicon in the aluminum coating.); In re Janakirama-Rao, 317 F.2d 951, 954, 137 USPQ 893, 895-96 (CCPA 1963). If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). See also Ex parte Hoffman, 12 USPQ2d 1061, 1063-64 (Bd. Pat. App. & Inter. 1989).

Applicants have not demonstrated that the introduction of additional steps or components of the prior art would materially change the characteristics of applicant's invention. Accordingly, this amendment to the claims does not overcome examiner's rejections.

Applicants' argument that premixes are not disclosed in patentees' teachings are noted. However, it is seen that the referenced disclosures, including their examples, are adequate in their teaching of inclusion of the blowing agents in the polyol component such that applicants' claims do not distinguish over the prior art on this element.

Applicants' showings in Table 1 only present comparisons based on PFB/HFP blends at one data point (currently outside applicants' inventive range), tris-chloroisopropyl phosphate (TCPP) with or without triethyl phosphate (TEP), and a limited class of polyether polyols (non-specified spray polyol #1), and such a showing is not

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commensurate in scope with the scope of the claims. Though it is noted that the probative value of a narrow range of data can be reasonably extended to prove the unobviousness of a broader claimed range. In re Kollman, 595 F.2d 48, 56 (CCPA 1979). (Holding that the unobviousness of a broader claimed range was proven by a narrower range of data, when one having ordinary skill in the art could ascertain a trend in the exemplified data which would allow him to reasonably extend the probative value thereof.), applicants' have not demonstrated basis for such an extension in the instant case.

Finally, in regard to Table 1, applicants' do not demonstrate the rational used to determine the expected flashpoint values used in their comparisons to elevate these values to more than opinion or assumption.

As to Table 2, it is held that applicants' claims are not commensurate in scope with the scope of the showings presented on reply.

Applicants' showings only present comparisons based on PFB/HFP blends, TCP, and a limited class of polyether polyols (Tercarol), and such a showing is not commensurate in scope with the scope of the claims.

Applicants appear to be formulating persuasive demonstration of unexpected results for blends of PFB/HFP in a 93:7 ratio at the lower end of their range of weight % values (for the binary blowing agent) {the absence of flashpoint data for the 11.1 & 17.7 samples in Table 2 column 5 are noted, are seen to be required for support of 4-35% range, and are not explained for by applicant}, TCP, and Tercarol polyether polyols. Though the probative value of a narrow range of data can be reasonably extended to prove the unobviousness of a broader claimed range. In re Kollman, 595 F.2d 48, 56 (CCPA 1979) {see also cite above}, applicants have not established that one having ordinary skill in the art could ascertain a trend in the exemplified data which would allow him to reasonably extend the probative value thereof to the scope of the claims as they stand. Applicants' have not demonstrated basis for such an extension in the instant case for any of the elements pointed to above.

Further, when considering showings of new or unexpected results, the following must be considered:

#### Result Must Compare to Closest Prior Art:

Where a definite comparative standard may be used, the comparison must relate to the prior art embodiment relied upon and not other prior art – *Blanchard v. Ooms*, 68 USPQ 314 – and must be with a disclosure identical (not similar) with that of said embodiment: *In re Tatincloux*, 108 USPQ 125.

#### Results Must be Unexpected:

Unexpected properties must be more significant than expected properties to rebut a prima facie case of obviousness. *In re Nolan* 193 USPQ 641 CCPA 1977.

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Obviousness does not require absolute predictability. *In re Miegel* 159 USPQ 716.

Since unexpected results are by definition unpredictable, evidence presented in comparative showings must be clear and convincing. *In re Lohr* 137 USPQ 548.

In determining patentability, the weight of the actual evidence of unobviousness presented must be balanced against the weight of obviousness of record. *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *In re Beattie*, 24 USPQ 2d 1040.

#### Claims Must be Commensurate With Showings:

Evidence of superiority must pertain to the full extent of the subject matter being claimed. *In re Ackerman*, 170 USPQ 340; *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *Ex Parte A*, 17 USPQ 2d 1719; accordingly, it has been held that to overcome a reasonable case of prima facie obviousness a given claim must be commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. Further, a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. See also *In re Kulling*, 14 USPQ 2d 1056.

Applicants' have not persuasively demonstrated unexpected results for the combinations of their claims. Comparisons have not been sufficiently made with the prior art embodiment relied upon. Applicants have not demonstrated their results to be clearly and convincingly unexpected and more than mere optimizations of the knowledge in the art or more significant than being secondary in nature. Applicants' have not demonstrated their showing to be commensurate in scope with the scope of combinations now claimed.

As to some specifics of applicants' showings and affidavit and comparative evidence, the following are noted:

Applicants' blowing agent component is not limited to the inclusion of the specifically recited blowing agents of component b.) in the amounts recited by the claims. Premix 2 of applicants' affidavit, which is argued to be an example of applicants' invention, has 7.5% of "PFP" blowing agent, a member of applicants' component b.), in addition to the 29.6% of the 93:7 "PFP:HFP" blend.

Applicants' affidavit is suggestive that novelty may reside in claims limited to "TCPP" rather than a "phosphorus compound" and blowing agents "consisting of" rather than "comprising" (see comparisons of Table 2). These comparisons would, however, have to be expanded to show comparisons based on (1) more than one polyol, (2) more than one amount value for the TCPP and the amount of TCPP included would need to be shown, and (3) more than on of the claimed component b.) blowing agents would need to be shown & more samples over the full range would need to be shown (in particular to this : it is noted that the showings of Table 2 column 5 lack adequate commensurate in scope showing for the scope of the range of values claimed by its lack of data being taken for the points between 8.7% and 25% of their currently claimed range of values for the binary blowing agent.

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Applicants' latest arguments have been considered. However, rejections are maintained for the reasons set forth above. Comments referring to the unsigned and uncorrected affidavit have been removed.

It is maintained that though the compositions of the prior art are not particularly referred to as being "non-combustible" favorable activity in this regard is an expected effect since the teachings do acknowledge that phosphorus compounds of the instant concern may be employed as fire retardants.

Examiner maintains that the failings of the provided showings of results have been previously identified in the remarks set forth, again, above. Though limited demonstration of unexpected behavior is noted, such limited showing of results is not persuasive for the scope of the claims as they currently stand. That the limited showings of results fall within the scope of applicants' claims does not therefore mean that they are commensurate in scope with the scope of the claims. Showings of results need to be representative of the scope of the claims or the limited representation's representation of the scope of the claims must be evident or explained. Applicants' arguments and other evidence do not make it clear why further representation of the scope of the claims is not required in order to overcome the above rejections over the claims as they currently stand.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

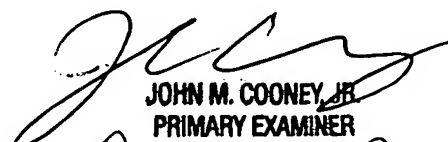
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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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Group 1700